CLAIMS

1. A fuel cell system comprising:

a fuel cell comprising an anode, a cathode, and an electrolyte interposed between said anode and said cathode; and

a purifying apparatus comprising a catalyst layer that purifies an effluent discharged from said anode,

wherein said purifying apparatus has a porous sheet including said catalyst layer and has two flow paths disposed on both sides of said porous sheet,

one of the flow paths has an inlet into which the effluent discharged from said anode is introduced,

the other flow path has an inlet into which air is introduced and an outlet, and

the effluent discharged from said anode is passed through said porous sheet and discharged from said outlet.

2. The fuel cell system in accordance with claim 1, wherein said fuel cell is a direct-type fuel cell in which an organic fuel is directly supplied to said anode and air is supplied to said cathode.

3. The fuel cell system in accordance with claim 2, wherein the effluent discharged from said anode is collected and purified without being supplied to the anode again.

4. The fuel cell system in accordance with claim 1, wherein said porous sheet has a layered structure in which

porous diffusion layers are disposed on both sides of the catalyst layer.

5. The fuel cell system in accordance with claim 1, wherein the air introduced into said the other flow path includes air discharged from said cathode.

6. The fuel cell system in accordance with claim 1, wherein a temperature inside said purifying apparatus becomes 30 to 80 ℃.

7. The fuel cell system in accordance with claim 1, wherein a catalyst in said catalyst layer is composed simply of platinum or comprises an alloy or mixture comprising platinum and other metal, and said other metal is at least one selected from the group consisting of ruthenium, iron, cobalt, nickel, chromium, molybdenum, rhodium, palladium, osmium, and iridium.

8. The fuel cell system in accordance with claim 2, wherein said organic fuel includes at least methanol.